

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A device for measuring the intensity (I) of a strong current passing through a wire (1), comprising a magnetic sensor (2) in the form of a loop surrounding the wire (1), and a turn (3) of conductive material surrounding the wire (1), conducting a high-frequency counter-current, the intensity of which cancels the magnetic field (H), wherein the turn (3) of conductive material is in short circuit and surrounds the magnetic sensor (2),

wherein the turn (3) of conductive material in short circuit is a closed turn, and

wherein a resistance R and an inductance L of the turn (3) of conductive material define an L/R filtering constant of the turn of conductive material with which the turn of conductive material filters components of the current passing through the wire.

2. (canceled)

3. (previously presented) A device for measuring the intensity (I) of a strong current passing through a wire (1), comprising:

a magnetic sensor (2) in the form of a loop surrounding the wire (1); and

a filter for the magnetic sensor that includes a turn (3) of conductive material surrounding the wire (1) and conducting a high-frequency counter-current, the intensity of which cancels the magnetic field (H), the turn (3) of conductive material being in short circuit and surrounding the magnetic sensor (2),

wherein a resistance R and an inductance L of the turn (3) of conductive material define an  $L/R$  filtering constant of the turn of conductive material with which the turn of conductive material filters components of the current passing through the wire.

4-8. (canceled)

9. (previously presented) The device as claimed in claim 3, characterized in that the turn (3) is made of soft iron (4).

10. (previously presented) The device as claimed in claim 3, characterized in that the turn (3) includes, internally, a channel (6) concentric with the torus of the turn, containing the magnetic sensor (2).

11-12. (canceled)

13. (currently amended) A device for measuring the intensity (I) of a strong current passing through a wire (1), comprising:

a magnetic sensor (2) comprising a first wire (7) forming a closed loop whose entire circumference is surrounded by coils of a coiled second wire (8), the magnetic sensor extending completely around a wire (1) whose current is being measured;

a turn (3) of conductive material that is a loop in short circuit and extending completely around the wire (1) whose current is being measured, said turn having an internal annular channel in which said magnetic sensor is housed, said turn conducting a high-frequency counter-current, the intensity of which cancels the magnetic field (H) created by the current in the wire whose current is being measured,

wherein said turn is a filter that filters components of the current passing through the wire and wherein a resistance R and an inductance L of the turn define an L/R filtering constant of the filter.

14. (canceled)